

Presentation Abstract

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Presentation: P252 - Emergence of *Coxiella burnetii* in Ruminants and Humans on Reunion Island: a new burden for public health?

Location: Uxmal 3

Pres. Time: Friday, Nov 06, 2015, 3:30 PM - 4:30 PM

Category: +A6. Cattle, goats, poultry, sheep, swine

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Abstract: Purpose

Q fever is a widespread zoonosis that is caused by *Coxiella burnetii* (*C. burnetii*), and ruminants are identified as the main sources of human infections. Some human cases have been described, but very limited information was available about Q fever in ruminants and humans on Reunion Island, a tropical island in the Indian Ocean.

Methods

A cross-sectional study was undertaken from March 2011 to August 2012 to assess the Q fever prevalence and to identify the major risk factors of *C. burnetii* infection in ruminants. A total of 516 ruminants (245 cattle, 137 sheep and 134 goats) belonging to 71 farms and localized in different ecosystems of the island were randomly selected. Samples of blood, vaginal mucus and milk were concomitantly collected from females, and a questionnaire was submitted to the farmers. Ticks from positively detected farms were also collected.

Results

The overall seropositivity was 12% in cattle, 1% in sheep and 13% in goats. *C. burnetii* DNA was detected by PCR in 0.8%, 4.4% and 20.1% in cow, sheep and goat vaginal swabs, respectively. *C. burnetii* shedding in milk was observed in 1% of cows, 0% in sheep and 5% in goats. None of the ticks were detected to be positive for *C. burnetii*. Infection increased when the farm was exposed to prevailing winds and when there were no specific precautions for a visitor before entering the farm, and they decreased when a proper quarantine was set up for any introduction of a new ruminant and when the animals returned to the farm at night. MLVA genotyping confirmed the genetic proximity between epidemiologically-related farms as demonstrated by identified risk factors. Following these results, a systematic survey on pregnant women going to the central hospital for medical follow-up was undertaken; 125 women were then blood-sampled for assessing Q fever prevalence. The serological analyses revealed 10% prevalence.

Conclusion

The survey is still going on for confirming prevalence and identifying consequences on pregnancy. Another survey in general population is about to start to determine the seroprevalence and the risk to live close to a farm.

Relevance: only a holistic approach could help understanding the epidemiology of Q fever in Reunion Island.

Technical Support

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